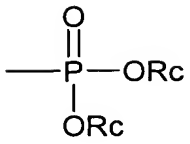

Rc is in each case independently H, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl or a hydroxy protecting group, and wherein said compound is substantially in the form of the (-) enantiomer; and

a chemotherapeutic agent selected from Asparaginase, Bleomycin, Busulfan, Carmustine, Chlorambucil, Cladribine, Cyclophosphamide, Cytarabine, Dacarbazine, Daunorubicin, Doxorubicin, Etoposide, Fludarabine, Gemcitabine, Hydroxyurea, Idarubicin, Ifosfamide, Lomustine, Mechlorethamine, Melphalan, Mercaptopurine, Methotrexate, Mitomycin, Mitoxantrone, Pentostatin, Procarbazine, 6-Thioguanine, Topotecan, Vinblastine, Vincristine, Dexamethasone, Retinoic acid and Prednisone.

36. A composition according to claim 35, further comprising a pharmaceutically acceptable carrier.

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37. A composition according to claim 36, wherein said at least one chemotherapeutic agent is Cytarabine, Etoposide, Mitoxantron, Cyclophosphamide, Retinoic acid, Daunorubicin, Doxorubicin or Idarubicin.

38. A composition according to claim 36, wherein said at least one chemotherapeutic agent is Doxorubicin.

39. A composition according to claim 36, wherein said at least one chemotherapeutic agent is Cytarabine.

40. A composition according to claim 36, wherein said at least one chemotherapeutic agent is Idarubicin.

41. A composition according to claim 36, wherein said at least one chemotherapeutic agent is Gemcitabine.

42. A composition according to claim 36, further comprising a multidrug resistance reversing agent or a biological response modifier.

43. A composition according to claim 42, wherein the multidrug resistance agent is PSC 833.

44. A composition according to claim 42, wherein said biological response modifier is a monoclonal antibody or a cytokine.

45. A composition according to claim 44, wherein said cytokine is an interferon, an interleukin or a colony-stimulating factor.

46. A composition according to claim 42, wherein the biological response modifier is Rituxan, CMA-676, Interferon-alpha recombinant, Interleukin-2, Interleukin-3, Erythropoetin, Epoetin, G-CSF, GM-CSF, Filgrastim, Sargramostim or Thrombopoietin.

47. A composition according to claim 36, wherein said compound is (-)- -L-Dioxolane-Cytidine (-L-oddC) or a pharmaceutically acceptable salt thereof.

48. A composition according to claim 36, wherein said compound is (-)- -Dioxolane-5-fluoro-Cytidine (5-FddC) or a pharmaceutically acceptable salt thereof.

49. A composition according to claim 47, wherein said compound is (-)- -L-Dioxolane-Cytidine (-L-oddC).

50. A composition according to claim 48, wherein said compound is (-)- -Dioxolane-5-fluoro-Cytidine (5-FddC).

51. A composition according to claim 36, wherein said compound is at least 95% free of the corresponding (+) enantiomer.

52. A composition according to claim 36, wherein said compound is at least 97% free of

the corresponding (+) enantiomer.

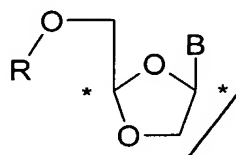
53. A composition according to claim 36, wherein said compound is at least 99% free of the corresponding (+) enantiomer.

54. A composition according to claim 36, wherein said composition is in unit dosage and contains 10 to 1500 mg of said compound per unit dosage form.

55. A composition according to claim 36, wherein said composition is in unit dosage and contains 20 to 1000 mg of said compound per unit dosage form.

56. A composition according to claim 36, wherein said composition is in unit dosage and contains 50 to 700 mg of said compound per unit dosage form.

57. A pharmaceutical combiantion comprising at least one compound of formula I

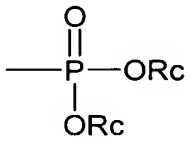


(I)

wherein

B is cytosine or 5-fluorocytosine,

R is H, monophosphate, diphosphate, triphosphate, carbonyl substituted with a C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{6-10} aryl, or



Rc is in each case independently H, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl or a hydroxy protecting group, and wherein said compound is substantially in the form of the (-) enantiomer; and

a chemotherapeutic agent selected from Asparaginase, Bleomycin, Busulfan, Carmustine, Chlorambucil, Cladribine, Cyclophosphamide, Cytarabine, Dacarbazine, Daunorubicin, Doxorubicin, Etoposide, Fludarabine, Gemcitabine, Hydroxyurea, Idarubicin, Ifosfamide, Lomustine, Mechlorethamine, Melphalan, Mercaptopurine, Methotrexate, Mitomycin, Mitoxantrone, Pentostatin, Procarbazine, 6-Thioguanine, Topotecan, Vinblastine, Vincristine, Dexamethasone, Retinoic acid and Prednisone.

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58. A combination according to claim 57, wherein said compound and said chemotherapeutic agent are in separate pharmaceutical formulations.

59. A combination according to claim 57, wherein said compound and said chemotherapeutic agent are in a combined pharmaceutical formulation.--